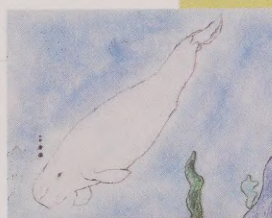


Lawrence Belugas in Endangered Population

Every day, all around the world, plant and animal species are disappearing forever, diminishing the biodiversity of our planet. To protect the St. Lawrence beluga population from extinction, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) declared it an "endangered" species in 1983. This status was confirmed in COSEWIC's 1993 decision.

The decline of St. Lawrence belugas, which began in the 1970s, is clearly one of the main causes of the decline in this population. Between 1880 and 1900—the most intensive period in the 400-year history of beluga hunting—as many as 100,000 were killed. Today, St. Lawrence belugas face a number of dangers.

The purpose of this fact sheet is to introduce the belugas of the St. Lawrence River, the threats they face and the new *Act on the protection of wildlife species at risk in Canada*, helping to better protect them.



Collective drawing: students of École Assomption, Baie-des-Sables



St. Lawrence belugas are year-round residents of the St. Lawrence River. Much of the beluga population spends the summer near the mouth of the Saguenay River. Although less is known about the beluga's winter range, it appears to extend downstream to Sept-Îles and along the Gaspé Peninsula. St. Lawrence belugas once occupied a much larger territory stretching as far east as Natashquan and into Chaleur Bay. The St. Lawrence belugas' distribution represents the southern limit of the species' worldwide range.

How is the status of endangered wildlife determined in Canada?

The status of wildlife species in Canada is assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), an independent advisory organization made up of sub-committees of specialists. COSEWIC can recommend a status for a species or a population (group of related individuals) based on quantitative criteria such as a decline in total population or a low or declining number of breeders.

The status categories used by COSEWIC to designate species, in decreasing order of gravity, are:

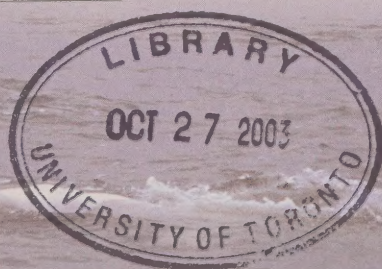
- ▶ Extinct (in the world)
- ▶ Extirpated in Canada
- ▶ Endangered
- ▶ Threatened
- ▶ Of special concern
- ▶ Not at risk

Any person may apply to COSEWIC for an assessment of the status of a wildlife species.

For more information: www.cosewic.gc.ca

Canada and Species at Risk

The preservation of species at risk has been a concern for Canadians for many years. In 1992, Canada was the first industrialized country to sign the United Nations Convention on Biological Diversity. In 1996, the Federal-Provincial Accord for the Protection of Species at Risk in Canada was signed, and, in 2003, the *Act respecting the protection of wildlife species at risk in Canada* (Species at Risk Act) was promulgated.



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St. Lawrence Belugas in Endangered Population

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Each and every day, all around the world, plant and animal species disappear forever, diminishing the biodiversity of our planet. To keep the St. Lawrence beluga population from suffering this fate, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) declared it an "**endangered species**" in 1983. This status was confirmed in COSEWIC's 1997 re-evaluation.

Commercial hunting of St. Lawrence belugas, which continued into the 1970s, is clearly one of the main causes of the decline in this population. Between 1880 and 1950 alone—the most intensive period in the 400-year-long history of beluga hunting—as many as 15,000 whales were killed. Today, St. Lawrence belugas face other kinds of dangers.

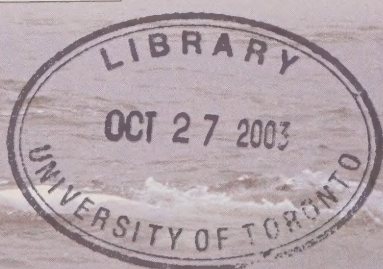
The aim of this fact sheet is to introduce the belugas of the St. Lawrence River, the threats they face and the new *Act respecting the protection of wildlife species at risk in Canada*, which is now helping to better protect them.



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Threats to the St. Lawrence

Pollution

St. Lawrence belugas are more exposed to pollution than any other beluga population in the world. Studies of carcasses recovered from the shores of the St. Lawrence River have revealed high levels of contaminants, including PCBs, DDT, mirex, mercury and lead. These contaminants come from various products such as paints, plastics and pesticides, or from industrial processing activities. New chemicals are developed every year, representing a new source of contamination whose adverse effects are as yet unknown.

Reductions in discharges of a number of toxic substances to the St. Lawrence over the past 15 years have resulted in a decrease in the extent of environmental contamination. Contaminant levels do not, however, decrease quite as fast in the fat and other tissues of beluga whales. Adult whales never lose the contaminant load they accumulate during their lifespan of some 30 years, and throughout their lifetime they are exposed to contaminants through their food supply. Newborns receive extremely high doses of contaminants from their mother's milk.

The many tumours and lesions found in beluga carcasses suggest a link between

exposure to pollutants and the presence of cancerous tumours in belugas. The scientific demonstration of such a link is, however, difficult to establish. In spite of this, in light of the health status of the belugas that have been studied, contaminants continue to represent the main known threat to the survival of this population.

Disturbance

Over the past 40 years, commercial shipping, pleasure boating and whale-watching activities have increased significantly in the St. Lawrence River, which is one of the busiest waterways in North America.

Current Recovery Actions

Various measures have been implemented to protect and conserve the St. Lawrence beluga population. While some are regulatory in nature, others are designed to enhance knowledge of belugas and raise public awareness of their plight.

The main measures are described below:

REGULATIONS

The Marine Mammal Regulations of the *Fisheries Act* prohibit hunting and harassment of belugas in the St. Lawrence.

The *Oceans Act* provides for the creation of marine protected areas to protect a species or its habitat, following consultations with all interested parties.

The **Regulations Respecting Marine Activities in the Saguenay-St. Lawrence Marine Park** were developed by **Parks Canada** in co-operation with other federal departments, the Quebec government, the scientific community as well as tourism, economic and social stakeholders. These regulations will help to better protect the whales from disturbance caused by whale-watching activities in the park, through restrictions on boating speeds, observation periods and the distance within which marine mammals may be approached (400 m for endangered species such as beluga whales).

RESEARCH

Fisheries and Oceans Canada has conducted an **aerial census** every three years since 1988 in order to assess the number of beluga whales and to monitor trends in the population size.

Fisheries and Oceans Canada also **monitors the presence of contaminants** in the whales and co-operates with the **St. Lawrence National Institute of Ecotoxicology** and **Parks Canada** in a carcass recovery program, in order to determine the causes of mortality. The Department also collaborates with the **Veterinary Science Faculty of St-Hyacinthe** on studies of diseases in St. Lawrence belugas.

Fisheries and Oceans Canada is conducting a study with the **Group for Research and Education on Marine Mammals (GREMM)** and **Parks Canada** to **characterize the noise level in beluga habitats** and the whales' reactions to this type of disturbance. As part of a collaborative undertaking with **Dalhousie University** and **Université Laval**, **Fisheries and Oceans Canada** is also studying the diet of the St. Lawrence beluga population. The information that is acquired will help to increase our understanding of various matters such as competition for food resources, contaminant sources and the **effects of disturbance on feeding**.

The minimum distance between a vessel and an endangered species is 400 m



Beluga Population

Little is known, however, about the effects of these disturbance factors on the feeding, movements and reproductive behaviour of belugas or on the rearing of their young. Besides the direct risk of mortality from collisions with boats, some of the mortalities reported in juveniles may be attributable to the disturbance of females and their young. Belugas can obtain information concerning their environment, detect their prey, communicate with others and ensure the link between mothers and their young by using sounds. Sounds with a great amplitude, such as those caused by seismic surveys, could affect these important activities. It is very difficult, though, to

assess the effects of disturbance on animal behaviour in the natural environment.

Changes to the Habitat

Coastal development and the harnessing of rivers can have a considerable effect on estuaries. The resulting alterations can lead to the loss of habitats normally frequented by belugas or to a decrease in the quality of their habitat, particularly during the summer. Climate change may also affect the beluga population by modifying the distribution or population size of important food resources.

Competition for Food Resources

The fact that belugas have to compete with seals and the fishing industry, among others, for access to fish may constitute a limiting factor for the population. The extent of the competition that occurs between belugas and other species has not been evaluated, nor is anything known about the impact that different fishing activities have on the species that belugas feed on. All in all, a precautionary approach is in order.

OUTREACH EFFORTS

Tour boats and pleasure boats are urged to avoid approaching endangered species at sea in order to prevent disturbances.

Fisheries and Oceans Canada developed a **code of ethics for marine mammal watching activities**, which applies to the entire St. Lawrence Estuary. The code was drafted in cooperation with the whale-watching industry and the **Saguenay-St. Lawrence Marine Park**.

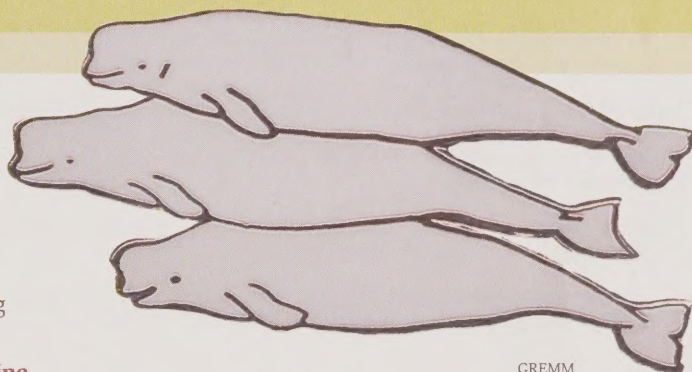
Every year, the Marine Park organizes a **whale-watching workshop** for cruise operators and guides to acquaint them with best practices for approaching cetaceans. It also organizes visits to marinas as part of a tour designed to raise awareness of the regulations among pleasure boaters.

Projects intended to **reduce disturbance and collisions with vessels** have been funded under the federal government's **Habitat Stewardship Program** or **Species at Risk**. Here are a few examples:

A **shore-based cetacean observation and interpretation network** is being set up by the **North Shore Estuary Area of Prime Concern (ZIP)**;

An **awareness project** intended to encourage employees and leaders of the industry to rethink whale-watching cruises has been developed by the **Marine Mammal Ecowatch Network**;

• The newsletter **Portraits of Whales** is published by GREMM during the whale-watching season. This document intended for cruise operators and guides describes the research projects that are under way and the action being taken to protect the whales of the St. Lawrence.



GREMM

A SHARED RESPONSIBILITY

The first St. Lawrence beluga **recovery strategy** was published in 1995 and followed by an action plan in 1998. The recovery team met again in 2002-2003 to work on updating the recovery strategy. This strategy, developed in consultation with various partners, enables all stakeholders to co-operate in the process of setting priorities for activities and their implementation.

GREMM, in collaboration with fishermen's and boaters' associations, NGOs and government departments, is developing an **intervention network to assist marine mammals in distress**.



Viewing whales from shore is an excellent way to avoid disturbing them

What We can do to Help

Since many of us live near rivers and streams that flow into the habitat of St. Lawrence belugas, we can all make certain choices that will improve our environment and that of the beluga population. By cutting back on our water consumption and the use of pesticides and other toxic substances, and by disposing of chemical products (paints, solvents, gasoline, batteries etc) in a responsible manner, we can contribute to the recovery of this endangered population.

For More Information:

BAILEY, Richard, and Nathalie ZINGER. *St. Lawrence Beluga Recovery Plan*, prepared by the St. Lawrence Beluga Recovery Team, Montréal, Fisheries and Oceans Canada and World Wildlife Fund - Canada, 1995, 73 p.

RICHARD, Pierre. *The Beluga*, Fact Sheet of the "Underwater World" series, Fisheries and Oceans Canada, 2001. (Available at www.dfo-mpo.gc.ca)

GOSSELIN, Jean-François, and Lena MEASURES, Fisheries and Oceans Canada. *Beluga Whale Population of the Estuary*, Fact sheet of the " Indicators of the State of the St. Lawrence " series, St. Lawrence 2000, 2002. (Available at www.slv2000.qc.ca)

FONTAINE, Pierre-Henry. *Whales of the North Atlantic: Biology and Ecology*, Sainte-Foy, Éditions Multimondes, 1998, 290 p.

ST. LAWRENCE - SAGUENAY MARINE PARK. *Observation Activities at Sea in the Marine Park, Regulations in effect*. 2002. Flyer. R63-241/2002E

Interesting sites:

www.whalesonline.com

www.portraitsowhales.net

www.parkscanada.gc.ca/saguenay

The Species at Risk Act (SARA)

- ▶ Once a wildlife species has been designated under SARA, it automatically becomes forbidden to kill, harm, harass, capture or take an individual, as well as to damage or destroy its residence.
- ▶ For species that are extirpated in Canada, endangered or threatened, the competent minister must prepare a strategy for their recovery.
- ▶ Fisheries and Oceans Canada is responsible for aquatic species and in this capacity is mandated to enforce prohibitions and to develop recovery strategies and action plans in partnership with stakeholders.
- ▶ A recovery strategy includes a description of the species and its needs, an identification of the threats to the survival of the species and threats to its critical habitat, a statement of the population and distribution objectives that will assist the recovery and survival of the species, and a schedule of recovery activities.

For more information: www.speciesatrisk.gc.ca

Did you know?

The current size of the St. Lawrence beluga population is estimated to be around 1000 animals.

In addition to being designated as an endangered population by COSEWIC, the St. Lawrence beluga has been granted the status of threatened species by the Quebec government under its *Loi sur les espèces menacées et vulnérables*.

Belugas feed on some 50 species of invertebrates and fish, including squid, worms, capelin and cod.

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